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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,437	07/03/2001	Robert Harvey Moffett	CH2814 US NA	1926

23906 7590 06/12/2002

E I DU PONT DE NEMOURS AND COMPANY  
LEGAL PATENT RECORDS CENTER  
BARLEY MILL PLAZA 25/1128  
4417 LANCASTER PIKE  
WILMINGTON, DE 19805

EXAMINER
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HRUSKOCI, PETER A

ART UNIT	PAPER NUMBER
1724	6

DATE MAILED: 06/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/898,437

Applicant(s)

MOFFETT, ROBERT HARVEY

Examiner

Peter A. Hruskoci

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_

- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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1. Claim 32 is objected to because of the following informalities: In claim 32 line 1 "claim" fails to include a number. Appropriate correction is required.

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-5, 7-14, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allgulin in view of Chung et al.. Allgulin disclose (see col. 2 line 39 through col. 5 line 12) a process for removing phosphate from an aqueous stream substantially as claimed. The claims differ from Allgulin by reciting the addition of anionic inorganic colloid and a flocculant to the stream. Chung et al. disclose (see col. 2 line 35 through col. 5 line 53) that it is known in the art to add flocculants, anionic inorganic colloids, and metal salts, to an aqueous stream derived from food processing, to aid in coagulating and flocculating precipitated solids from the stream. It would have been obvious to one skilled in the art to modify the process of Allgulin by addition of the recited anionic inorganic colloid and flocculant in view of the teachings of Chung et al., to aid in coagulating and flocculating precipitated solids from the stream. The specific pH utilized would have been an obvious matter of process optimization to one skilled in

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the art, depending on the specific aqueous stream treated and results desired, absent a sufficient showing of unexpected results.

4. Claims 2-4, 6-14, and 25-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Allgulin in view of Chung et al. as above, and further in view of Laurent et al.. The claims differ from the references as applied above by reciting that the recovered flocculated mass is used as a nutrient source. Laurent et al. disclose (see col. 2 line 30 through col. 3 line 64) that it is known in the art to utilize a recovered flocculated sludge from a food processing waste streams as animal feed. It would have been obvious to one skilled in the art to modify the references as applied above by utilizing the recited flocculated mass as a nutrient source in view of the teachings of Laurent et al., to aid in disposal of the flocculated mass.

5. Claims 15, 16, 19, 22-24, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayukawa in view of Monick et al.. Ayukawa disclose (see col. 2 line 35 through col. 7 line 65, and Example 32) a process for removing phosphate from an aqueous stream substantially as claimed. The claims differ from Ayukawa by reciting the addition of a flocculant and anionic inorganic colloid to the stream. Monick et al. disclose (see col. 3 line 15 through col. 8 line ) that it is known in the art to add flocculants, anionic inorganic colloids, and metal salts, to an aqueous stream containing phosphate, to aid in coagulating and flocculating precipitated solids from the stream. It

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would have been obvious to one skilled in the art to modify the process of Ayukawa by addition of the recited flocculant and anionic inorganic colloid in view of the teachings of Monick et al., to aid in coagulating and flocculating precipitated solids from the stream. The specific pH utilized would have been an obvious matter of process optimization to one skilled in the art, depending on the specific aqueous stream treated and results desired, absent a sufficient showing of unexpected results.

6. Claims 17, 18, 20-22, and 35-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ayukawa in view of Monick et al. as above, and further in view of Laurent et al.. The claims differ from the references as applied above by reciting that the recovered flocculated mass is used as a nutrient source. Laurent et al. disclose (see col. 2 line 30 through col. 3 line 64) that it is known in the art to utilize a recovered flocculated sludge from a food processing waste streams as animal feed. It would have been obvious to one skilled in the art to modify the references as applied above by utilizing the recited flocculated mass as a nutrient source in view of the teachings of Laurent et al., to aid in disposal of the flocculated mass.

7. Applicant argues that there is no suggestion in Allgulin and Chung et al. to add an inorganic colloid and/or flocculant to the solution in Allgulin because there is nothing further in the solution to be precipitated. Applicant is directed to col. 4 lines 59-63 of

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Allgulin which suggests the addition of a flocculating agent to the solution containing the precipitate to aid in separating a flocculated precipitate from the solution.

8. Applicant alleges that the Moffett Declaration shows the unexpected and synergistic effect of utilizing the anionic inorganic colloid and flocculant as in the instant process. The Declaration has been carefully considered but fails to overcome the above rejection. It is submitted that the specific test conditions utilized to produce the results shown in the Declaration are not commensurate with the scope of the instant claims. Claims 1, 5, 25, and 34 properly written to include the use of specific amounts of metal ions, a silica microgel colloid and a cationic polyacrylamide flocculant, would be allowable.

9. Applicant alleges that no reasonable person would in view of Ayukawa combine Zr metal ions and inorganic colloids together. It is submitted that Monick et al. was used to teach that it is known in the art to add zirconium, flocculants, anionic inorganic colloids, and metal salts, to an aqueous stream containing phosphate, to aid in coagulating and flocculating precipitated solids from the stream. Furthermore, applicant has not presented sufficient factual evidence to support the above allegation.

10. Applicant argues that the zirconium described in Monick et al. is a catalyst that by definition does not combine with contaminants causing precipitation and flocculation. It is submitted that zirconium and polyelectrolytes utilized in Monick et al. appear to form a

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flocculated mass as in the instant process. Furthermore, applicant has not presented sufficient factual evidence to support the above argument.

11. Applicant's arguments concerning Laurent et al. appear to be based on the propriety of Allgulin, Chung et al., Ayukawa, and Monick et al. These references are deemed properly applied for reasons stated above.

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter A. Hruskoci whose telephone number is (703) 308-

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3839. The examiner can normally be reached on Monday through Friday from 6:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. David Simmons, can be reached on (703) 308-1972. The fax phone number for this Group is (703) 872-9310 (non-after finals) and 703-872-9311 after finals.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

  
**Peter A. Hruskoci**  
**Primary Examiner**  
**Art Unit 1724**

P. Hruskoci  
June 10, 2002